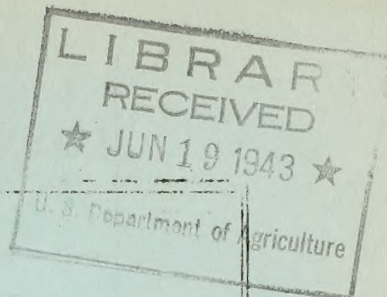


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SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for the

COLORADO RIVER DRAINAGE BASIN

March 1, 1942

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Issued by the
United States Department of Agriculture
Soil Conservation Service
Division of Irrigation
In Cooperation with
The Colorado Agricultural Experiment Station
Colorado State College
Fort Collins, Colorado

March 10, 1942

SNOW SURVEYS AND INVESTIGATION WATER FORECASTS

for the

COLORADO FIVE DELTA BASIN

March 1, 1942

Issued by the
United States Department of Agriculture
Soil Conservation Service
Division of Investigation
In cooperation with
The Colorado Agricultural Experiment Station
Colorado State College
Fort Collins, Colorado

March 10, 1942

SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for

COLORADO RIVER BASIN

March 1, 1942

The following data pertaining to snow surveys and irrigation water-supply forecasts are provided by the Division of Irrigation, Soil Conservation Service, U. S. Department of Agriculture, in cooperation with State departments, other federal bureaus and local organizations. The snow measurements are made principally by field personnel of the following Federal Government organizations: Forest Service, National Park Service, Geological Survey, Bureau of Reclamation, Indian Service; and the Utah Agricultural Experiment Station. This work is otherwise conducted cooperatively with the State Engineers of Wyoming, Utah, and Colorado, U. S. Geological Survey, Utah and Colorado Agricultural Experiment Stations, and various municipalities, irrigation associations, power companies, and others. Precipitation records are supplied by the U. S. Weather Bureau.

SUMMARY OF MARCH 1 SNOW SURVEYS AND COMPARISON OF DATA WITH THAT OF PREVIOUS YEARS
BY WATERSHEDS

WATERSHEDS	Snow Depth			Water Content			Number Courses in Average	Snow Density			1942 Water Content in percent of	
	Seven year Avg.*	1941	1942	Seven year Avg.*	1941	1942		Seven year Avg.*	1941	1942	Seven Year Avg.*	1941
	In.	In.	In.	In.	In.	In.		Percent	Percent	Percent		
COLORADO RIVER												
Colorado River**	40.3	35.0	41.4	10.5	8.2	10.1	20	26	23	24	96	123
Yampa River	50.4	44.0	50.9	14.3	11.0	12.9	4	28	25	25	90	117
White River	47.4	46.4	49.6	14.5	12.5	13.8	2	31	27	28	95	110
Gunnison River	47.1	45.9	49.0	12.9	13.0	12.7	11	27	28	26	98	98
Dolores River	39.6	42.8	39.0	9.8	10.0	9.2	4	25	23	24	94	92
San Juan River	44.2	48.4	44.6	12.6	15.4	10.9	7	29	32	24	87	71
Gila River	9.4	9.0	10.5	2.7	3.1	2.6	9	29	34	25	96	84
Green	---	---	31.5	---	---	8.1	4	---	---	26	---	---

*Some for shorter periods

**Above Grand Junction, Colo.

P R E C I P I T A T I O N D A T A

WATERSHED	STATE	Precipitation October 1 to February 28	Departure from Normal	Precipitation February	Departure from Normal
		Inches	Inches	Inches	Inches
Colorado	Colorado	9.65	+2.66	1.70	+0.02
Green	Wyoming	5.34	+1.70	0.58	-0.24
San Juan	New Mexico	5.33	+1.09	0.93	-0.02
Gila	Arizona	7.00	+0.48	1.19	-0.39
Gila	New Mexico	4.49	+0.03	0.78	-0.13

WATER SUPPLY OUTLOOK

Normal precipitation occurred on the watershed of the Colorado River in Colorado during February, but there was a small deficiency in precipitation on the principal tributaries, the San Juan, Gila, and Green. Precipitation from October 1 to March 1, was above normal for the entire drainage basin.

COLORADO RIVER AND TRIBUTARIES IN COLORADO. For the Colorado River, above Grand Junction, the March first snow surveys indicate 1/4 more water in the snow than a year ago. Conditions on the Gunnison watershed were found to be identical with those last year at this time. Snow cover on the Yampa is 1/6 better and on the White it is 1/10 greater than it was last year. On the western slope the soil moisture conditions in all farming areas are reported good to excellent. The stream flow is at this time normal or better. The storage in Taylor Park Reservoir is approximately three times as much now as a year ago with every indication of full capacity before the start of the irrigation season.

SAN JUAN AND DOLORES RIVERS. On the head waters of the San Juan, in the southwestern part of Colorado, the water content of the snow is 1/4 less and for the Dolores just slightly less than it was a year ago.

GILA AND SALT RIVERS. The March 1 surveys on the snow courses located on the headwaters of the Salt and Gila rivers in New Mexico and Arizona show that there is 1/6 less water in the snow pack than there was a year ago. Stream flow during February was normal or better. Soil moisture is generally good although the ground surface is dry in the Salt River valley. There was little change during February in the water stored in the Salt River Project reservoirs but the amount in storage is now nearly twice what it was a year ago. There was a slight decrease in the water stored in Lake Pleasant and a slight gain in the San Carlos reservoir.

The present indications are that the water supply for the Colorado River and tributaries in Western Colorado will be normal or better, but for the San Juan drainage the present conditions are not so favorable. The Dolores outlook compares favorably with that of last year. The prospects for normal run off on the Gila, and the Salt drainages are fair to good as indicated by the snow cover. Because of the general soil moisture conditions and the exceptional amount of water in storage at this time an adequate irrigation supply for the Arizona areas is now assured.

COLORADO RIVER WATERSHED

Summary of Federal and State Cooperative Snow Surveys
Issued March 10, 1942, at Fort Collins, Colo.

Main Drainage and No. Snow Course	Local Drainage	State	Locality	Elev. ft.	National Forest	Mar. 1 Snow Cover Measurements			
						Av. Snow Depth	Av. Water Content	1941	1942
						In.	In.	In.	In.
COLORADO RIVER									
(Above Grand Junction)									
7 Park View*	Willow Cr.	Colo.	7mi. SE. Rand	9200	Routt	31.0	21.9	32.3	7.8
12 Phantom Valley	Colorado R.	"	11mi. N. Grand L.	9300	Ry. Mtn. N.P.	32.3	28.6	30.5	8.7
16 Berthoud Pass	Fraser R.	"	4mi. S. West Port.	9700	Arapaho	49.7	45.7	43.6	13.0
19 Tennessee Pass*	Eagle River	"	Tennessee Pass	10200	Cochetopa	33.1	26.2	37.2	7.8
33 Ind. Pass Tunnel	Lincoln Gulch	"	W. Port. Tunnel	10200	Holy Cross	47.5	39.9	49.5	9.2
34 N. Lost Trail Cr.	Crystal R.	"	3mi. E. Marble	9200	"	46.9	42.6	49.7	10.3
37 M. Fork Camp Cr.	Williams Fk.	"	13mi. N. Dillon	9000	Arapaho	33.5	25.7	38.3	8.2
44 Fiddler Gulch	Eagle River	"	2mi. E. Mitchell	11000	Holy Cross	46.7	39.9	50.6	11.8
45 Nast	Frying Pan R.	"	23mi. SE. Basalt	8700	"	24.7	16.5	23.2	6.1
54 Maroon Lake	Maroon Creek	"	8mi. SW. Aspen	9300	"	40.0	36.1	43.5	11.3
56 Mesa Lakes	Mesa Creek	"	15mi. E. Palisade	10000	Grand Mesa	52.4	62.5	59.1	14.7
59 Lulu	Lulu Creek	"	14mi. N. Grand L.	10200	Ry. Mtn. N.P.	46.1	38.0	42.2	13.8
62 Willow Creek P.	Willow Cr.	"	Willow Cr. Pass	9500	Arapaho	36.6	28.6	40.1	9.4
64 N. Inlet Grand L.	N. Inlet Cr.	"	4mi. NE. Grand L.	9000	Ry. Mtn. N.P.	29.2	23.0	29.6	7.0
65 Lake Irene	Beaver Creek	"	1mi. SW. Milner P.	10600	"	54.7	50.5	54.2	15.7
66 Thunderbolt Peak	Buchanan Cr.	"	5mi. E. Monarch L.	9500	Arapaho	47.2	37.0	45.2	11.7
69 Arrow	S. Ranch Cr.	"	Arrow	9500	"	31.5	27.2	31.0	7.6
70 Lapland	St. Louis Cr.	"	7mi. SW. Fraser	9300	"	32.2	32.8	37.0	7.5
79 Fremont Pass #2	Blue River	"	Fremont Pass	11400	"	48.9	39.0	50.7	12.4
91 Lynx Pass No. 2	Rock Cr.	"	7mi. NE. Toponas	9100	Routt	41.5	37.7	40.0	11.0
96 Shrine Pass	Blue River	"	Shrine Pass	10500	Arapaho	--	--	50.7	--
97 Grizzly Peak	"	"	1mi. W. Loveland P.	11250	"	--	--	45.3	--
YAMPA RIVER									
6 Dry Lake	Soda Creek	Colo.	4mi. NE. Steam. Spgs	8200	Routt	40.3	35.0	41.4	10.5
8 Columbine Lodge*	Harrison Cr.	"	Rbt. Ears Pass	9300	"	53.7	46.1	58.7	15.4
9 Elk River	Independence Cr.	"	Columbine	8700	"	62.4	52.2	59.6	18.2
91 Lynx Pass No. 2*	Morrison Cr.	"	7mi. NE. Toponas	9100	"	43.9	40.2	45.2	12.5
WHITE RIVER									
35 Burro Mountain	N. Elk Creek	Colo.	8mi. S. Buford	9000	White River	41.5	37.7	40.0	11.0
36 Rio Blanco	White River	"	4mi. NW. Trappers	8500	"	50.4	44.0	50.9	14.3
*On adjacent Drainage. @Average for period of Record.									
						52.7	51.9	55.0	16.1
						42.0	40.9	44.3	12.9
						47.4	46.4	49.6	14.5
						15.2	15.2	15.2	15.3
						9.8	9.8	9.8	12.4
						12.5	12.5	12.5	13.8

COLORADO RIVER WATERSHED

Summary of Federal and State Cooperative Snow Surveys
Issued March 10, 1942, at Fort Collins, Colo.

No.	Main Drainage and Snow Course	Local Drainage	State	Location		Elev.	National Forest	Mar. 1 Snow Cover Measurements					
				Locality	Description			Av. @	In.	Snow Depth	Av.	Water Content	1942
								1941	In.	1942	Av.	1941	1942
								In.	In.	In.	In.	In.	In.
								46.6	41.0	43.9	12.0	10.5	10.3
18	GUNNISON RIVER	Slate River	Colo.	3mi. N. Crested B.	22-13S-86W	9000	Gunnison	41.9	38.1	39.9	10.3	9.5	9.2
42	Crested Butte	Marshall Cr.	"	Marshall Pass	24-48N-6E	10800	Cochetopa	31.1	35.0	32.4	8.3	10.2	8.4
43	Marshall Creek	"	"	"	19-48N-7E	10500	"	33.3	26.8	29.3	7.5	6.1	6.6
46	Poncha Creek*	Taylor River	"	Taylor Park Res.	19-14S-82W	9700	Gunnison	65.3	71.5	69.4	18.4	21.3	19.9
53	Park Cone	Kiser Creek	"	10mi. N. Cedaredge	2-12S-95W	10000	Grand Mesa	33.4	20.5	30.5	8.7	6.2	6.6
55	Alexander Lake	Snowshoe Cr.	"	16mi. NE Paonia	14-13S-89W	7500	Gunnison	41.6	43.8	43.9	12.4	14.2	10.4
58	Snowshoe Mesa	Red Mtn. Cr.	"	5mi. S. Ouray	29-43N-7W	9800	Uncompahgre	71.7	74.1	80.3	21.0	21.9	24.0
85	Ironton Park	Surface Cr.	"	13mi. N. Cedaredge	23-11S-94W	10000	Grand Mesa	66.9	68.6	74.4	20.0	20.8	22.6
87	Trickle Divide	"	"	11mi. N. Cedaredge	34-11S-94W	9500	"	47.8	47.7	52.6	12.8	13.1	13.5
89	Park Reservoir	Porphyry Cr.	"	Monarch Pass	19-49N-6E	10800	Cochetopa	38.0	37.5	42.4	10.3	8.8	11.0
94	Shine Mt. No. 2	Henson Cr.	"	10mi. W. Jake City	35-14N-6W	10200	Gunnison	47.1	45.9	49.0	12.9	13.0	12.7
					Average for Drainage								
23	DOLORES RIVER	Dolores R.	Colo.	2mi. S. Rico	11-39N-11W	8700	Montezuma	30.9	36.1	26.7	7.7	9.5	6.4
24	Rico	San Miguel R.	"	Telluride	6-42N-8W	8600	"	32.6	35.3	30.7	7.2	6.8	6.0
25	Telluride	Dolores R.	"	10mi. N. Rico	24-41N-10W	10300	"	51.4	59.6	52.4	12.6	12.2	12.9
90	Lizard Head	Ground Hog Cr.	"	16mi. N. W. Rico	23-41N-13W	8900	"	43.3	40.2	46.4	11.5	11.5	11.5
					Average for Drainage			39.6	42.8	39.0	9.8	10.0	9.2
26	SAN JUAN RIVER	Wolf Creek	Colo.	Wolf Creek Pass	4-37N-2E	10000	Rio Grande	74.3	75.0	74.9	22.4	25.1	20.1
29	Wolf Creek Pass*	"	"	4mi. W. Wolf Cr. P.	10-37N-1E	10000	San Juan	83.1	93.1	89.2	23.9	29.9	22.4
30	Upper San Juan	Animas R.	"	2mi. NE. Silverton	10-41N-7W	9400	"	25.7	30.1	27.4	5.7	7.6	5.1
31	Silverton Sub. S.	Cascade Cr.	"	5mi. N. Electra L.	12-39N-9W	8850	"	36.6	40.7	38.8	9.6	11.3	8.4
93	Cascade	Los Pinos R.	"	11mi. NE. Columbus	24-37N-6W	7950	San Juan	26.1	24.9	27.3	8.4	8.6	8.2
2	Granite Peaks	Chin Lee Cr.	Ariz.	8mi. S. Inkochohuka	36-4N-109.1W	8500	Navajo Res.	---	---	---	---	---	---
13	Roof Butte	Tuntsa Wash	N. Mex.	12mi. NE Crystal	26-1N-108.8W	8600	"	---	---	---	---	14.2	---
17	Washington Pass	Amargo R.	"	6mi. W. Chama	36-9N-106.7W	7750	Off Forest	22.1	27.3	20.1	6.5	9.0	5.0
18	Chamita*	Navajo R.	"	6mi. NW. Chama	36-9N-106.7W	8500	"	41.2	48.0	34.5	11.6	16.0	7.2
					Average for Drainage			44.2	48.4	44.6	12.6	15.4	10.9

*On adjacent drainage

©Average for period of record

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COLORADO RIVER WATERSHED

Summary of Federal and State Cooperative Snow Surveys
Issued March 10, 1942, at Fort Collins, Colo.

Main Drainage and No. Snow Course	Local Drainage	Location		Elev.	National Forest	Mar. 1 Snow Cover Measurements				
		State	Locality			Descrip- tion	Av. Snow Depth	Av. Water Content		
						1941	1942	1941	1942	
						In.	In.	In.	In.	
GILA RIVER										
11 Frisco Divide	Blue River	N. Mex.	6mi. S. Luna	31-6S-20W	8000	Apache	9.3	10.6	13.7	2.9
14 State Line	"	"	Alpine; Luna	6-6S-21W	8000	"	12.9	17.6	14.8	3.4
22 Taylor Creek	Taylor Creek	"	2mi. NE. Inmans	20-10S-10W	7850	Gila	--	--	4.5	0.7
3 Nutrioso	San Fran. R.	Ariz.	5mi. SE. Nutrioso	23-6N-30E	8500	Apache	10.3	8.3	12.6	2.8
4 Beaver Head	Castle Cr.	"	11mi. SW. Alpine	13-4N-30E	8000	"	14.8	17.8	19.5	6.1
5 Coronado Trail	Coleman Cr.	"	4mi. S.	26-5N-30E	8000	"	16.1	19.0	20.7	5.9
6 McNary	Salt River	"	3mi. NW. McNary	14-8N-23E	7200	W.M. Ind. Res.	11.2	7.3	6.3	2.5
7 Forest Dale	"	"	5mi. SW. Showlow	2-9N-21E	6000	"	4.4	0.0	2.2	1.1
8 Trout Creek	"	"	3mi. SW. McNary	5-7N-24E	6400	"	3.3	0.0	0.0	1.0
9 Milk Ranch	"	"	4mi. W.	28-8N-23E	7000	"	2.2	0.0	4.3	0.0
				Average for Drainage			9.4	9.0	10.5	2.7
GREEN RIVER										
24 Mulligan Park	Surveyor Cr.	Wyo.	Fremont Lake	17-35N-108W	8900	Wyoming	--	--	32.5	8.1
25 Kendall R.S.	Green River	"	27mi. NW. Pinedale	23-38N-110W	7900	"	--	--	23.1	7.2
26 Loomis Park	Beaver Cr.	"	28mi. "	14-37N-111W	8500	"	--	--	38.5	10.0
7 E. Rim Divide	Fish Cr.	"	13mi. SE. Bondurant	32-37N-111W	7950	Teton	--	--	32.0	7.0
				Average for Drainage			--	--	31.5	8.1

@Average for period of record

CHERRYMAN REVISED - 1913

Showing more extensive work with 12 and 14 inch logs to Vienna

6000' drilled in 1st 1/2 of No. 11 level

Location	Depth	Interval	Remarks	Notes	Remarks
1001	1001	1001	1001	1001	1001
1002	1002	1002	1002	1002	1002
1003	1003	1003	1003	1003	1003
1004	1004	1004	1004	1004	1004
1005	1005	1005	1005	1005	1005
1006	1006	1006	1006	1006	1006
1007	1007	1007	1007	1007	1007
1008	1008	1008	1008	1008	1008
1009	1009	1009	1009	1009	1009
1010	1010	1010	1010	1010	1010
1011	1011	1011	1011	1011	1011
1012	1012	1012	1012	1012	1012
1013	1013	1013	1013	1013	1013
1014	1014	1014	1014	1014	1014
1015	1015	1015	1015	1015	1015
1016	1016	1016	1016	1016	1016
1017	1017	1017	1017	1017	1017
1018	1018	1018	1018	1018	1018
1019	1019	1019	1019	1019	1019
1020	1020	1020	1020	1020	1020
1021	1021	1021	1021	1021	1021
1022	1022	1022	1022	1022	1022
1023	1023	1023	1023	1023	1023
1024	1024	1024	1024	1024	1024
1025	1025	1025	1025	1025	1025
1026	1026	1026	1026	1026	1026
1027	1027	1027	1027	1027	1027
1028	1028	1028	1028	1028	1028
1029	1029	1029	1029	1029	1029
1030	1030	1030	1030	1030	1030
1031	1031	1031	1031	1031	1031
1032	1032	1032	1032	1032	1032
1033	1033	1033	1033	1033	1033
1034	1034	1034	1034	1034	1034
1035	1035	1035	1035	1035	1035
1036	1036	1036	1036	1036	1036
1037	1037	1037	1037	1037	1037
1038	1038	1038	1038	1038	1038
1039	1039	1039	1039	1039	1039
1040	1040	1040	1040	1040	1040
1041	1041	1041	1041	1041	1041
1042	1042	1042	1042	1042	1042
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1080	1080	1080	1080	1080	1080
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1094	1094	1094	1094	1094	1094
1095	1095	1095	1095	1095	1095
1096	1096	1096	1096	1096	1096
1097	1097	1097	1097	1097	1097
1098	1098	1098	1098	1098	1098
1099	1099	1099	1099	1099	1099
1100	1100	1100	1100	1100	1100

Notes to boring not shown

Notes to boring not shown

Notes to boring not shown

Notes to boring not shown

Notes to boring not shown

Notes to boring not shown